

# LICA

LONG ISLAND COMPUTER ASSOCIATION, INC.

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President, AL STONE Vice President, BOB KOWITT Secretary, JACKIE TULUMELLO Treasurer, AILEEN HARRISON  
CBBS (516) 561-6590 STACK ADDRESS: P.O.BOX 71 HICKSVILLE N.Y. 11801 (516) 293-8368 Editor, AL LEVY

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Volume.6 No.11

## THE STACK

November 1982

### PRESIDENT'S MESSAGE

How is it possible that some of us are doing so much with our microcomputer systems, and others have accomplished so little? It occurs to me that with a club of several hundred people, with multiple subgroups for those with particular special interests, virtually any problem is solvable, and expert counsel can be found on virtually every subject. I submit that the fault lies in that venerable American institution: - popularization.

The second great wave of computer retail stores is upon us, eclipsing that to which we were treated in 1975-76. Today computers are sold by retail chain stores. Every newsstand, it seems, has almost as many computer-oriented magazines as it has those of sexual orientation. Inept and disinterested print and electronic journalists hold the same interview endlessly and expound upon the virtues of an ill-defined milieu called "the home computer revolution". It is not remarkable then that, as basic system prices have fallen, small computers have begun to seem as commonplace as TVs and microwave ovens.

No home should be without one (or two)! Be the first to have Donkey Kong (TM) at home! Everyone uses VisiCalc (TM) (substitute WordStar (TM), PASCAL MT+ (TM), etc.).

Well, permit me to propound a minority viewpoint. Programmable computers are NOT for everyone. If you want to justify the expenditure of several thousands (or even several hundreds) of dollars you've got to bring to the experience of computer ownership an enthusiasm, an energy, a curiosity that some people lose with the passing of their schooldays and others may possibly never have manifested at all.

If it is true that these wonderful machines are not for everyone, it can also be said that LICA is not for everyone. There is a world of difference between a thing's being available and that same thing being used appropriately. If you seek more than pride of ownership, and the ability to shout "me too" when someone mentions a particular device or program, you belong among us. If you recognize that computers involve so many rapidly-changing disciplines that no one person could keep abreast of them all, LICA is the place for you, and your 1983 dues just might be the best \$12 investment you've ever made. As my help wanted ads used to read: nay-sayers, crybabies, and simplists need not apply.

### ANOTHER BENEFIT OF MEMBERSHIP

Phil Cochems is a manufacturers' rep. He has generously donated many of the not-inexpensive tools which we raffle off at our General Meetings the third Friday evening each month. These raffles are WITHOUT CHARGE, and are one of the ancillary benefits of attendance at these sessions. Remember, you must be present to win!

Al Stone

THE SECRETARY'S REPORT OCTOBER 15 MEETING

President Al Stone announced that LICA has purchased liability insurance that covers any meeting of the whole group or of any subgroup. He also announced that the club's Lexicon 300 baud acoustically coupled modem would be raffled at the next meeting at \$10 per ticket.

Dave Minot Tells Us "What's New"

- 1) CP/M ® 3.0 is in the data testing stage and should be out within a few months. The documentation has been totally rewritten!!
- 2) He has seen the new Dynabyte computer which runs a 16 and an 8 bit microprocessor concurrently - the Z80B at 6 megahertz and 8086 at 8 megahertz. It has hardware and software diagnostics and an extender to the S-100 bus and Multi-bus.
- 3) The Hazeltine Executive 80 terminal has a built in computer, 2 built in 5" floppies and CP/M ®.
- 4) In software, MicroPro has released "StarBurst", a front end for CP/M ® that enables the user to set up his own menus. They have also released "InfoStar", the other half of "CalcStar".
- 5) Microsoft now has a local sales office in Stamford Conn.

Ted Friedman of Anderson-Jacobson, Inc. spoke about the line of used and reconditioned equipment he is selling. He demonstrated a 300 baud, serial RS232 daisy wheel printer with keyboard that he sells for \$995. It has word processing features and is compatible with the Qume sequences for the software.

Stan Misel was our main speaker for the evening. He talked about his experience with Radio Shack's Model 16, which uses Motorola's 68000 16 bit microprocessor and also runs in the Z80 mode to be compatible with Model 2 software. It comes with a green phosphor screen and two double sided Tandem drives.

The Z80 is used as the I/O device for the disk drives and ports. The port I/O is memory mapped. The 68000 has 17 32-bit registers and looks like a very interesting chip.

There is a hard disk controller and a high resolution graphics board available for the Model 16 but the Model 16 doesn't have much software written for it yet. It comes with a generic 16 bit assembler; Rand McFarlan COBOL is the only other language available for it. However these things are coming. Stan wants to program in C once a compiler is available for the 68000. We would like to hear from him again in the future.

**Bob Kowitz's very-advanced Microsoft Basic course will take place the second Saturday in December, 12/11/82.** We will be meeting in Bob's home at 1727 N. Jerusalem Rd. (corner of Bellmore Ave.). Bring your own chair and your Microsoft Basic manual. The cost (which will be donated to LICA) is \$20.00, payable to Bob, Lester Lutzker or Al Levy. Bob is an accomplished programmer who is able to do things in Microsoft Basic that I was certain could not be done and probably Microsoft didn't know about it either. He is able to enhance the language with his techniques.

Jackie T.

**TAXES AND YOUR COMPUTER**

Aileen Harrison, our club Treasurer, and the wife of Gerry, LICA's founding father, is an accountant by profession. She will give a short presentation at our November General Meeting on the ramifications, from the standpoint of both NYS and federal tax practice, of deducting one's computer-related expenses. For many of us, this is particularly appropriate with the approach of year's end. Members only, please.

**MONTHLY MEETINGS**

All meetings, except IBM PC/UG and 6800 UG are held at the New York Institute of Technology, Old Westbury Campus. LICA meets each month on the third Friday evening at 8:00 in Room 508, Building 500. Our speaker this month will be Bruce Laskin. His topic, computer graphics and how they have been developed and applied at New York Tech. If you are not curious as to what one does with a few million dollars worth of computer equipment dedicated to graphics then stay home! The last time this "Walt Disney Compu-Speaker" addressed LICA, fantasies permeated the room and collectively we had to strike an enormous CTRL/C to break up the meeting.

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NOTICE MICROSOFT BASIC USERS  
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There will be an MBASIC course taught by Bob Kowitz. The date has been set for the second Saturday in December, (12/15/82). This is not a course on fundamentals, but rather a discussion of little used commands and functions and the more esoteric aspects of MBASIC. Cost of this course is \$20.00 with the proceeds going to LICA. Bob will also be covering some of the tricks and shortcuts that he has learned and applied. If you are interested, Send \$20 to LICA - P.O. BOX 71 - HICKSVILLE, N.Y. 11802 or contact:

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\* \*  
\* . Lester Lutzker (516) 621-7780 \*  
\* \*  
\* Bob Kowitz (516) 401-8552 \*  
\* \*  
\* Al Levy (516) 293 8368 \*  
\* \*  
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IBM/PCUG

On October 20th, I attended the NY/PCUG with a few other members of LICA. A report will be forthcoming. I'll be visiting with someone who has just acquired a brand new Zenith 8088/8085 system. I've spoken to five people on the phone and two that came over to my home soliciting advice on what to buy for their IBM's. It is a very interesting time to be partaking of the still developing fruits of the primitive mechanical computing machine conceived by Charles Babbage and his girlfriend Ada.

Professionally I must have spewed out a million written words while producing proposals, instructions, memoranda, etc. and I'm not a writer! I am an engineer. What a tremendous help the word processor is to anyone who must even occasionally write and polish his words!

My word processor is now my appointment pad. It is the only source I know of that has an abundance of such marvelously stretchable paper. It is filled with everything I have to do and yet, when the deed is accomplished the paper has enough stretch to allow me to file a report, no matter how long, of the activities that I have participated in.

I'm looking forward to the acquisition of a powerful data base management system. At last I will be able to file a person's 'calling card' under their first name AND last name, what they sell, what they buy, where I met them, etc. I will not have to worry about which one of several categories to place his 'card' in; I'll just put it in ALL of the categories simultaneously.

Applications programs such as word processors and data base management systems multiply our efficiency. Even if most of the people entering the world of computers only learn to use application programs they will have multiplied their efficiency and become the children of the future instead of the people who are suffering from "future shock".

Friday, November 12 we will be meeting at the NYIT, Commack branch. See you there at 7:30.

Marvin

The Vedit Editor and Word Processor  
By Jack Schachter (516) 421-0705

If you believe that your CP/M® system will run any CP/M® word processor you may be in for a surprise. Because of the wide variety of consoles and printers with special requirements, full-screen editors and word processors must be tailored to your system if you want to get the most out of them.

In many cases, software vendors stock a number of program variations, any of which will match your system, if it is a popular one. Sometimes they have a program which customizes a standard program. However, if your console is unusual, you will need an editor, like Vedit, that you can program yourself. If your printer is more complex than a typewriter, you may also need a tailored text processor.

Vedit is primarily a full-screen editor for programming. For this purpose it is first-rate. It is also very useful for word processing if your requirements are simple.

The first thing that you do when you get your (copyable) disc from CompuView Products, Inc., is to set up your keyboard to perform the various edit functions. You pick the keys that you will find the easiest to remember to perform functions like moving the cursor, deleting, inserting or moving text, etc. For example, if you have an up-arrow you can use that for moving the cursor up one line, or for moving text, you can use control/M. If you are not happy about the way that you set it up, you can easily change it anytime.

This flexibility makes it possible for the very powerful Vedit commands to be used on the simplest keyboard while it can also make use of all kinds of function keys on sophisticated keyboards.

In addition Vedit can be customized for your own style of editing. Tabs can be set anywhere, the portion of text to be edited can be automatically paged on the screen, text can be changed from upper to lower case and vice versa, indents can be set, scrolling parameters can be set, etc.

Customization may sound very complicated but it is, in fact, easy to do. The instruction book is very clear and once you have decided on the parameters that you are going to use, it takes only about ten minutes to do the entire customizing procedure.

Now you are ready to go. You can either originate text or modify an existing ASCII file. There are two operating modes in Vedit, Visual and command. Command mode is very similar in operation to CP/M's® ED, however it does have a few more commands. I will come back to this mode later.

Visual mode is what is used most of the time. In this mode, you just type in text as if you were using a typewriter.

The text however appears on the console instead of on paper. If you always type text exactly as you would want to see the final copy, then that's all there is to it. If you are like the rest of us, then you will need to do some editing.

Here's what you can do. You can move the cursor to any part of the text, whether now on screen or not. You can change the character at the cursor or delete a character, word or line. You can insert a character or a whole book. You can automatically indent lines. Your text can be formatted so words that extend past the right margin are automatically shifted to the next line. You can print any or all of the text. You can copy or move any portion of the text. A tab key is available for ease of typing tables. At all times, the bottom line shows the status including the line and column of the cursor, whether or not there is text being held aside for future use, and whether the full screen insert mode is active.

In the Command mode, Vedit can do everything that ED does and in a very similar way, mostly with the same symbols. In addition you can open and close the output file open an input file, change discs or delete a file if the text is too long for the current disk, insert control characters into the text, and print a section of text.

Also, in this mode you can change a number of basic system parameters. These include the cursor appearance, the indent increment, lower case conversion conditions, the right margin the tab positions, and several other less frequently used conditions.

For programming Vedit is excellent. Its output may be directly used as a source program for most assemblers and compilers without modification. If you want to write a letter, a term paper or any other document that is straight-forward typing, Vedit also does a good job. It cannot however, type a series of letters each with a different address taken from another file if cannot fully justify text, a facility that may be needed if the copy is to be photographed for printing. It does not have the flexibility of screen-splitting nor can it easily access multiple files which is often helpful. It does not support specialty printers which have proportional spacing, super or subscripts nor graphic ability. However, if an inexpensive text processor program is used many of these defects can be remedied.

The price of Vedit is \$141, much less than full function word processors. For an additional \$45, CompuView provides an update option which will give you the next two program revisions. I bought Vedit four months ago but have not received the first revision yet. By their ads, however, I see that some useful additions have been made and I am looking forward to them.

(By the way, this was written using Vedit.)

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**NEC-PC-8000 OWNERS PLEASE NOTE**

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Jerry Worthington, 75 Weaving Lane, Wantagh NY 11793, (516) 735-2952, is compiling a list of NEC-PC-8000 owners to share information and discuss forming a NEC subgroup.

D U E S

Members wishing to pay dues via the U.S. MAIL should send all checks to Aileen Harrison, 36 Irene Lane East, Plainview, N.Y. 11803

The Stack is now available at the following locations:

Computerifics	14 Cold Spring Road, Syosset
ComputerLand	79 Westbury Ave., Carle Place
Future Visions	70 Broad Hollow Rd (Rte 110), Melville
L.I.Computer General Store	103 Atlantic Ave, Lynbrook
Programs Unlimited	20A Jericho Tpke, Jericho/Westbury
Programs Unlimited	Smithtown Mall Smithtown
Software Emporium	151 Mineola/Willis Ave, Roslyn Hghts.

When visiting these dealers, please mention that you are a member of LICA. The Stack is looking for ads, the dealers are looking for customers. The members of the Long Island community should support local merchants who in turn support us.

If you have anything to contribute to the Stack, messages can left on my office phone via modem (516) 293-8368. If you intend to use this number:

- 1) Call in terminal mode
- 2) Do not generate echo
- 3) Hit a carriage return or two to sign on
- 4) You can then leave your message or sign off. You must sign off with an ESCAPE character.
- 5) Most important! Please use "ESCAPE" or whichever character your machine recognizes as (19 Hex) or (27 Decimal) to sign off. I have two options at this point. One allows you time to diddle around, getting all your response together. The other is to insert a time-loop to hang up if you are not ready. I prefer not to hang up, and to leave the responsibility up to you.

There will be bugs crawling around, so please report any problems. My computer is generating line feeds and echo while recording the entire transmission. Once I get enough REMS and a few options installed, the program will be given to any one in LICA who asks. If things look weird at your end, don't despair. I will be receiving your messages! Fellas and gals, this is an office (business) telephone. If any one wants to tie it up, break the program, etc. it is extremely easy to accomplish. The only recourse I have if the phone is abused is to turn off the system and we all lose. Just for the record, here are some of the messages I received the first week:

BOB KOWITT 516 481 8552

I NEED 8 NULLS SET BEFORE I CAN READ PROPERLY. YOUR DISPLAY IS NOT COMING TO ME PROPERLEY. IN THE MIDDLE OF EACH LINE, I GET A LINE FEED AND MORE UNTIL PAST THE RIGHT SIDE OF MY SCREEN.

Marvin 516 -724-0574

Hello Marvin Freifeld is my name. It works!!!! Perfectly!

Ralph Kenyon (413) 354 7875

hello al, I guess it works!!

Jackie Tulumello 669-8147

It is 9:50 P.M. I thought I would call your computer to see how everything is working. Everything looks good. I'll call you tomorrow to see if you got this (really important) message. Bye.

Mark Zeiger 212 454-6985

Pretty system. My only complaint is that you have linefeed characters without carriage returns. The usual standard is CR - LF even if you are doing multiple line feeds. Your way is screwing up my display. Good luck with your new bulletin board. Mark Z

Al Stone (516) 731-1649

You've inspired me to convert Mark Zeiger's MODEM.COM to BASIC-80. I've got it about 75% finished. I gave a copy to Jackie T. When you're ready to try a full BBS, I've got the code for the MESSAGE-80 System. See what you've started?

A.M.Stone (516) 731-1649/7796

At your service. Hey...change the last message to read 'ESCAPE', not 'CTRL/C. Did you get my transmission? If so would you please call up and confirm it when you transpose it. Thanks Al. Bye.

## USING NEC PC-8023A PRINTER FEATURES WITH WORDSTAR

by: Jerry Worthing (516) 735-2952  
75 Weaving Lane, Wantagh, NY 11793

In using the MicroPro WordStar word processor software with my NEC PC-8000 computer system and NEC PC-8023A matrix printer I was disheartened to find that some of the printer's most desirable features could not be run with the software.

In particular, it was not possible to run condensed characters (17 cpi), elite type (12 cpi), enlarged characters (twice size), proportionally spaced characters, 1/8 inch line spacing, and boldface.

The problem of getting boldface type, i.e. triple strike of characters, was the easiest to solve. Even though the printer has backspace capabilities, that utilize the proper 08H command, it did not respond to the ^PB command, and printed each letter between the toggle commands three times. This was solved by rerunning the INSTALL program for WordStar designating the printer as type A, a teletype-like printer that does not backspace. It may be a little less efficient in running time, but it works.

An article, "WordStar for the IBM Personal Computer" by Donald V. Victorson in the September 1982 issue of The Stack, a monthly publication published by the Long Island Computer Association, suggested the idea to modify ("patch") the WordStar program.

In looking for places to put the various commands I found several locations that are not being used. The obvious available locations are the four USR spaces that are available to be specified by the user. Additionally, certain other functions of WordStar will not operate with this printer, and their space is used to provide the desired functions. The subscript and superscript location is pre-empted to provide a toggle for thin line-spacing (1/8"). The ribbon change location is used to provide a toggle for wide (double size) type.

The procedure to patch WordStar is rather straightforward:

Having made these patches you can achieve the following printing functions with the NEC PC-8023A printer and WordStar: ^PE produces Elite type (12 cpi)

^PQ produces Condensed type (17 cpi)

^PR produces Regular pica type (10 cpi)

^PW produces Proportional type

^PY produces Wide type (double)

^PY toggles back to previous width

^PT turns on the Thin line spacing (1/8").

Line spacing cannot be changed in the middle of a line, however, Boldface type and Double-strike can be inserted in the middle of a line. Type size can be changed

in the middle of a line but you must be careful or you will mess up the left margin offset and the right margin justification. Line spacing can be returned to normal (1/8") with another ^PT.

1. Using a backup copy of Wordstar that has the INSTALL and WSU programs type: INSTALL (CR).

2. Carry out the following commands in response to prompts, noting that if a value is to remain unchanged it is not necessary to re-enter the value; a simple carriage return (CR) is sufficient:

MONITOR	TYPE
Do you want normal first-time....	N D
Filename of WordStar to modify	WS.COM (CR)
Terminal Menu	K Y
Printer Menu	A Y
Communications Protocol Menu	N Y
Driver Menu	L Y
Modification Complete?	N
Location to be changed..	ROLUP: (CR)
ADDR: 06BFX OLD VAL: 00	NEW VAL: 02 (CR)
Location...	(CR)
06C0	00 1B (CR)
Location...	(CR)
06C1	00 42 (CR)
Location...	(CR)
06C2	00 00 (CR)
Location...	(CR)
06C3	00 00 (CR)

Following the same procedure continue:

Location Label	Initial Hex Addr.	New Values
ROLLOW:	06C4X	02 1B 41 00 00
USR1:	06C9	02 1B 51 00 00
USR2:	06CE	02 1B 50 00 00
USR3:	06D3	02 1B 45 00 00
USR4:	06D8	02 1B 4E 00 00
RIBBON:	06DD	01 0E 00 00 00
RIBOFF:	06E2	01 0F 00 00 00

\* Note that the locations shown are for my version of WordStar, and may differ with other versions. Using the location label, rather than the hex address, will assure being at the proper memory location.

Micro Thoughts - Al Levy

Although some of these items do not relate directly to computers, they demonstrate "State Of The Art" technology in electronics/video and the like.

- 1) Newsday has announced that they intend to use a cable channel to broadcast the news without the use of on camera news-persons (anchor type or otherwise). Pictures will be of the item being covered or a computerized graphics display.
- 2) Cablevision has announced a channel for video game playing. For \$12 a month or so you have the choice of forty games, twenty four hours a day. Play PACMAN, SPACE INVADERS or GODZILLA-KONG to your hearts delight.
- 3) Check out the October 1982 issue of National Geographic. This is Volume 162, No.4 which has a cover picturing a Motorola chip in a person's hand. Inside the issue you will find a 3M ad showing the first four notes of Beethoven's Fifth Symphony in binary logic. Articles deal with "the chip", it's design, manufacture and uses. There is a glossary for the uninitiated plus articles describing the applications of computers in other lands such as Japan, computers in cars, the chip in watches, and even predictions of things to come. There is even an article on "Silicon Valley" and the hopes, profits, risks and losses of those in the industry. It goes without saying that the pictures are fantastic. How many of our seasoned programmers have ever beamed down to the surface of a chip? The magazine gives you that opportunity. For those who feel estranged from our society upon hearing words and/or phrases like Byte, EPROM, Bus, Memory Addressing or DMA I highly recommend this issue of National Geographic. For the time being, forget all of the primers on the market. This magazine has them all beat for clarity, scope, pictures and ease of reading.

Address inquiries to:  
National Geographic Society  
17th and M Streets N.W.  
Washington, D.C. 20036

With all the attention to printers and attendant software I feel like throwing my 2c worth. I am using a Diablo and it can be programmed to characters per inch, and/or lines per inch without going into (Diablo) graphics mode or throwing switches. This little program is actually a utility that I use for my business when printing out a catalog. Rather than having photo-reductions made, I print 120 characters per line and 88 lines per (8 1/2 X 11) page. The map on the back page of the STACK was drawn in this manner. The program should work in any BASIC on any machine.

```
REM***** Turn On The Printer
10 FILE:2,LIST
REM*****
REM Vertical Motion (Line Spacing)
REM*****
REM CHR$(27)=ESCAPE Character (mandatory)
20 A$=CHR$(27)
REM*****
REM CHR$(30)=RS or Vertical Spacing Indicator (mandatory)
30 B$=CHR$(30)
REM*****
REM CHR$(7) =BEL (the Number 7) optional
REM You should pick the number for the above which suits your needs.
REM The formula: Your Number (C$ in this case) LESS 1 X 1/48
REM 7-1=6 6 X 1/48=1/8th of an inch.
REM or stated more simply "8 lines per inch"
REM*****
40 C$=CHR$(7)
REM Now send the 3 character sequence to the printer
50 D$=A$+B$+C$
60 OUT2,D$
REM*****
REM Horizontal Spacing (Characters Per Inch)
REM A$ Is Still The Escape Character
REM*****
REM CHR$(31) =US or HS1 to the Diablo (mandatory)
80 B$=CHR$(31)
REM*****
REM CHR$(9) =TAB (the Number 9) optional
REM You should pick the number for the above which suits your needs.
REM The formula: Your Number (C$ in this case) LESS 1 X 1/120
REM 9-1=8 8 X 1/120=1/15th of an inch.
REM or stated more simply "15 characters per inch"
REM*****
90 C$=CHR$(9)
100 D$=A$+B$+C$
110 OUT2,D$
REM From here on in its your ball game.
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The winner of the Metric Conversion Contest will be announced at the general meeting and in next month's issue. The program will be re-printed in its entirety.....

AI

SUB-GROUP	CHAIRMAN	PHONE(516)	Meetings Each Month
6502	Steve Perry	744-6462	
680X	Roger Kaucher	796-8746	
IBM	Marvin Freifeld	724-0574	2nd Friday 7:00
PET	Phil Cochems	333-4213	3rd Friday 7:00
Poly	Al Levy	293-8368	Halloween 12:01
S-100	Richard Wilson	747-4241	2nd Friday 7:30
TRS-80	Ed Zulkowski	938-3320	3rd Friday 7:00

ATTENTION ALL MEMBERS OF L.I.C.A. WHO OWN THE RADIO SHACK COLOR COMPUTER: S. PERRY JENKINS, P.O. BOX 62, SOUTHAMPTON, NY 11968 is compiling a list of all RSCC owners so as to share information etc.

#### COMMERCIAL ADVERTISING POLICY:

In an effort to cover our costs of duplication and mailing, and to provide a more extensive monthly edition of THE STACK, commercial display ads are accepted in 1/4 1/2 and Full Page sizes. Minimum participation is for three months. The three month rates are \$45, \$65, and \$100 respectively. Copy need not be the same each month. Camera-ready preferably. Type setting & layout work available at additional charge. All checks should be made payable to LICA.

The Long Island Computer Association, INC. is open to everyone, amateur or professional with an interest in computers, computer applications, programming, or related subjects. Dues are \$12.00 per year which includes monthly issues of this publication. The STACK is mailed to other computer clubs on an exchange basis as well as to various technical publishers. Permission for reprinting or quoting items in The STACK is granted providing that credit is given & a copy of the reprint is sent to The STACK. Members can vote in club elections, & place non-commercial classified ads(at no charge) and commercial ads at nominal cost. Member articles and other data affecting The STACK must be received by the 15th day of any month, to be published in the following issue. All copy should be sent to: Al Levy P.O.Box 71, Hicksville N.Y. 11801 (516) 293-8368

#### Business Card Advertising

The STACK will be printing a page of business cards. Yours can be included. Cost to members is \$25 per year, non members \$50 per year. Your business may be computer related or not. Special Offer: We will print your card for three consecutive months for \$10. This can be applied to the year rate if you wish to continue the ad. This offer is good until January 1st 1983.



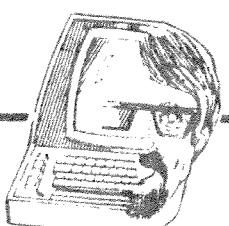
ASSOCIATES

(516) 669-8147

\* TELEPHONE  
(516) 541-4098

**ANGELO TULUMELLO, Ph.D.**  
Consulting Chemist

P.O. BOX 314  
LINDENHURST, N.Y. 11757



**The Computer Consultant**

Robert Kowitz  
1727 N. Jerusalem Rd., E. Meadow, NY 11554  
(516) 483-5781 or 481-8552

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: DBASE II 2.38 $460 :  

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: No hand holding. Bob Kowitz (516) 401-8552 :  

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#### CLASSIFIED ADS

**PolyMorphic (S-100)** computer for sale. I have two and I am definitely keeping one. This is truly a business machine. All software/manuals included. BASIC, Assembler, Editor, Confidence Package, Word Processor, much more! (The STACK is type-set using the Poly) Call: Al Levy (516) 293-8368.

**ACCOUNTING**, record keeping & Tax Services provided weekly, monthly, or quarterly (basis to suit). Sales Tax, Employer Wage Forms, Bank Records, Cash Receipts and Disbursement Journals, General Ledgers etc. Small business and personal accounts invited. AILEEN HARRISON: (516) 938-6769

**REPAIR SERVICE:** KIM, SYM, AIM-65 Single Board Computers. **NEW OKIDATA MODEL 82A PRINTER** fully tested with full warranty \$499. Interface cables for most personal computers are available. **BMC COLOR MONITORS UNDER \$300.00** CALL: Steve Perry (516) 744-6462

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**FOR SALE OR TRADE** Toolkit for original ROMs PET. 200 8k programs on tape. Old copies of MICRO MAG., CREATIVE COMPUTING, BYTE, PEOPLES COMPUTING & DR DOBB'S JOURNAL. Call: Phil Cochems (516) 333-4213

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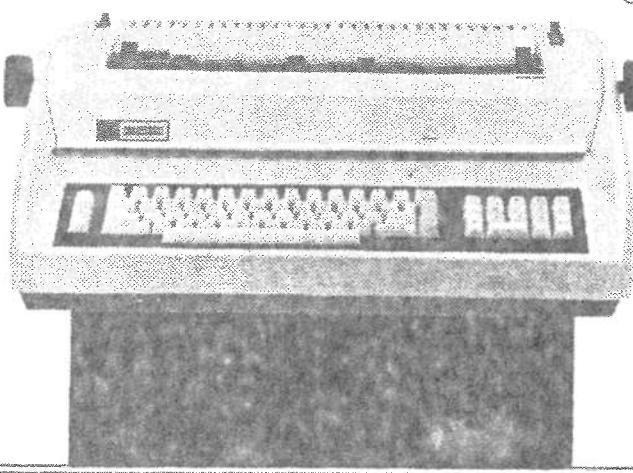
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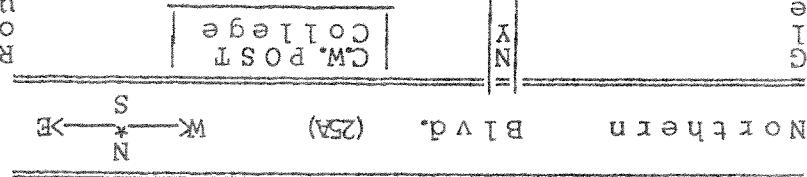
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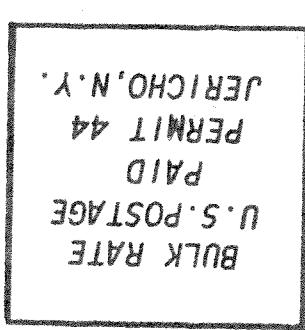
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